REMARKS

Claims 1-29 are pending in the application. By way of the present amendment claims 14, 16, 17, and 19 are being canceled. Claims 1-17, 19-20, and 23-29 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Browning (U.S. Pat. No. 6,415,388). Claims 18 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Browning in view of Hussain (U.S. Pat. No. 6,172,611).

With regards to claim 1, applicants respectfully submit that Browning fails to teach a programmable storage location storing a first temperature limit value that is accessible via an instruction executed by the integrated circuit. The Office action points to Fig. 3, unit 110 as providing control location with programmable operation. Applicants respectfully submit that Fig. 3 shows nothing regarding a programmable storage location storing a first temperature limit value that is accessible via an instruction. Accordingly, applicants respectfully submit that claim 1 is not anticipated by Browning, and that claim 1 and all claims dependent thereon distinguish over Browning for at least that reason.

With regards to claim 4, applicants respectfully submit that there is no teaching in Browning, nor has the Office action pointed to any teaching, that the integrated circuit deasserts the first temperature control signal in response to access to a control location of the integrated circuit. Such access is described in the specification, e.g., at page 5, lines 19-25, where deassertion occurs when software writes a control bit. Accordingly, applicants respectfully submit that claim 4 patentably distinguishes over Browning for this additional reason.

With regards to claim 5, applicants respectfully submit that Browning fails to teach that the integrated circuit deasserts the first temperature control signal when the temperature measurement falls below a programmable second temperature limit value or when a control location in the integrated circuit is accessed according to a programmable mode of operation. There is no such teaching in Browning, nor has the Office action pointed to any such teaching regarding such a programmable mode of operation. Accordingly, applicants respectfully submit that claim 4 patentably distinguishes over Browning for this additional reason.

With regards to claim 7, applicants respectfully submit that Browning fails to teach that the addressable storage location coupled to the temperature sensor is accessible by an instruction executed by the integrated circuit and supplies an indication of the temperature measurement on the integrated circuit. There is no such teaching in Browning regarding accessing an addressable storage location storing the temperature recorded by the temperature sensor using an instruction executed by the integrated circuit. Accordingly, applicants respectfully submit that claim 7 distinguishes for this additional reason.

With regards to claim 8, applicants respectfully submit that Browning fails to teach the second output terminal coupled to provide external to the integrated circuit an asserted signal when the temperature measurement indicated by the temperature sensor is above the second temperature limit value. As seen in Fig. 4, only a single control value is shown coming out of control logic 140 in Browning. Accordingly, applicants respectfully submit that claim 8 distinguishes over Browning for this additional reason. Note that claim 8 was amended to provide properly depend from claim 2.

Claim 13 has been amended and now recites that the signal on the first output terminal is deasserted when a control location on the integrated circuit is accessed or when the measured temperature goes below a lower limit value, according to a programmable mode of operation. Browning fails to teach (see, e.g., Fig. 4 of Browning) that the signal on the first output terminal is deasserted when a control location on the integrated circuit is accessed or when the measured temperature goes below a lower limit value, according to a programmable mode of operation. Accordingly, applicants respectfully submit that claim 13 and all claims dependent thereon distinguish over Browning.

Claim 20 has been put in independent form and recites generating a signal on a first output terminal of the integrated circuit according to the comparison to control the temperature of the integrated circuit; and accessing a control location in the integrated circuit to cause the signal to be deasserted. Such access is described in the specification, e.g., at page 5, lines 19-25, where deassertion occurs when software writes a control bit. Browning fails teach anything regarding accessing a control location in the integrated circuit to cause the signal to be

deasserted. Accordingly, applicants respectfully submit that claim 20 and all claims dependent thereon distinguish over Browning.

Applicants note that there is no reason given for the rejection of claim 22. Nor is there any teaching in Browning of generating a signal on a first output terminal of the integrated circuit according to the comparison to control the temperature of the integrated circuit, and deasserting the signal with an instruction sequence.

Claim 23 has been put in independent form and recites asserting a second signal on a second output terminal of the integrated circuit when the measured temperature is above the second limit value, thereby indicating that temperature has exceeded a safe limit. Browning fails to teach asserting a second signal on the second output terminal. Accordingly, applicants respectfully submit that claim 23 distinguishes over Browning.

With regards to claim 25, applicants respectfully submit that Browning fails to teach (see microprocessor 110 in Fig. 4 of Browning) two output terminals that are coupled to supply an indication of results of the comparison. Accordingly, applicants respectfully submit that claim 25 patentably distinguishes over Browning.

With regards to claim 27, applicants respectfully submit that Browning fails to teach first and second output terminals coupled to provide the first and second signals which are indicative of a comparison between the temperature measurement and the first and second temperature limit values. Accordingly, applicants respectfully submit that claim 27 and all claims dependent thereon distinguish over Browning.

With regards to claim 29, applicants respectfully submit that Browning fails to teach a software accessible control register (described, e.g., on page 6, lines 7-19 of the specification) controlling operation of the compare logic in the first and second output terminals. There is no teaching in Browning of such a software accessible control register (e.g., in control logic 140), nor is there teaching of the first and second output terminals. For these additional reasons, applicants respectfully submit that claim 29 patentably distinguishes over Browning.

In view of the above amendments and remarks, applicants respectfully submit that all claims are now in condition for allowance. If the Examiner believes that there are any issues that could be resolved via a telephone conference, the Examiner is respectfully requested to contact the undersigned at the number listed below.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to Commissioner for Patents, Washington, D.C. 20231 on the date shown below.

Mark Zagorin — 3/31/2003 (Date)

Respectfully submitted,

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MARKED-UP COPY OF AMENDED CLAIMS IN ACCORDANCE WITH 37 C.F.R. § 1.121(c)(1)(ii)

8. (Amended) The integrated circuit as recited in claim [1] 2 further comprising:
a second output terminal coupled to provide external to the integrated circuit an asserted signal when the temperature measurement indicated by the temperature sensor is above a second temperature limit value.

13. (Amended) A method comprising:
measuring a temperature of an integrated circuit with a temperature sensor, the temperature sensor being a circuit within the integrated circuit;
comparing the measured temperature to a first limit value stored in the integrated circuit; and
generating a signal on a first output terminal of the integrated circuit according to the comparison to control the temperature of the integrated circuit, wherein
the signal is asserted when the measured temperature is greater than the first limit value, and wherein
the signal on the first output terminal is deasserted when a control location on the integrated circuit is accessed or when the measured temperature goes below a lower limit value, according to a programmable mode of operation.

14. Canceled.

15. (Amended) The method as recited in claim [14] 13 wherein the asserted signal is used to inhibit a cooling device to control the temperature of the integrated circuit.

16. Canceled.

17. Canceled.

19. Canceled.

20. (Amended) A method comprising:

measuring a temperature of an integrated circuit with a temperature sensor, the temperature sensor being a circuit within the integrated circuit;

comparing the measured temperature to a first limit value stored in the integrated circuit;

generating a signal on a first output terminal of the integrated circuit according to the comparison to control the temperature of the integrated circuit; and

[The method as recited in claim 16 further comprising] accessing a control location in the integrated circuit to cause the signal to be deasserted.

21. (Amended) The method as recited in claim [16] 13 wherein the asserted signal causes assertion of an interrupt and wherein a sequence of instructions, responsive to the asserted interrupt, activates a cooling device.

23. (Amended) A method comprising:

measuring a temperature of an integrated circuit with a temperature sensor, the temperature sensor being a circuit within the integrated circuit;

comparing the measured temperature to a first limit value stored in the integrated circuit; and

generating a signal on a first output terminal of the integrated circuit according to the comparison to control the temperature of the integrated circuit; [The method as recited in claim 13 further comprising:]

comparing the measured temperature to a second limit value stored in the integrated circuit; and

asserting a second signal on a second output terminal of the integrated circuit when the measured temperature is above the second limit value, thereby indicating that temperature has exceeded a safe limit.